

WHAT IS CLAIMED:

1. An adaptation device for molding a dental material to a die in the preparation of a dental coping with the die having the shape of a tooth to be restored and with said dental material placed over the surface of said die before the dental material is adapted to the die, said adaptation device comprising; a base for placement of the die, a cover mounted on the base over the die to form an enclosed primary chamber, an inlet opening extending through said cover into communication with said primary chamber, a source of gaseous fluid connected to said inlet opening for pressurizing said primary chamber, one or more outlet opening(s) extending through said base in proximity to said die and diaphragm means surrounding said die and said outlet opening(s) for isolating said die from said primary chamber such that upon pressurizing said primary chamber with said gaseous fluid said diaphragm is caused to collapse about said die and apply a uniform pressure over said dental material composition for adapting said dental material to the die.
- 2- An adaptation device as defined in claim 1 wherein said diaphragm means is a tubular elastic member having one open end mounted on said base to form a secondary chamber which communicates with the outlet opening(s) with said open end sealing off said secondary chamber from said

primary chamber.

- 3- An adaptation device as defined in claim 2 wherein said tubular elastic member is composed of a polymeric composition or of a natural rubber.
- 4- An adaptation device as defined in claim 3 further comprising a removable clamp mounted over the open end of said tubular elastic member to assure the formation of a seal between said secondary chamber and said primary chamber.
- 5- An adaptation device as defined in claim 3 wherein said base further includes a recessed area upon which the die is mounted.
- 6- An adaptation device as defined in claim 5 wherein said outlet opening(s) extend through said base to a location in said recessed area facing the underside of said die.
- 7- An adaptation device as defined in claim 6 wherein said primary chamber is pressurized to between 2-7 atmospheres.
- 8- An adaptation device as defined in claim 7 wherein said gaseous fluid is air.
- 9- An adaptation device as defined in claim 6 wherein the secondary chamber has a vacuum.

- 10- An adaptation device as defined in claim 6 wherein said dental material is composed of a base composition comprising high and low fusing temperature metal particles selected from one or more precious metals or precious metal alloys and a binder.
- 11- An adaptation device as defined in claim 10 wherein said binder is a wax.
- 12- An adaptation device as defined in claim 11 wherein said dental material is composed of a multilayer of a base material and/or a multilayer filler material.
- 13- An adaptation device as defined in claim 12 wherein said filler material comprises gold.
- 14- A method for molding a dental material to a die in the preparation of a dental coping with the die having the shape of a tooth to be restored and with said dental material placed over said die, comprising the steps of: enclosing the die and dental material in a plenum chamber formed in a housing having an inlet opening adapted to be connected to a source of fluid for pressuring the chamber and at least one outlet opening in proximity to the die, mounting a tubular elastic member with one open end over said die to surround said die and dental material with the open end isolating the outlet opening(s) and die from the plenum chamber and pressuring the plenum

chamber to cause said tubular elastic member to collapse about said die for uniformly applying pressure to adapt said dental material to the die.

15- A method as defined in claim 14 wherein said plenum chamber is pressurized to between 2 to 7 atmospheres.

16- A method as defined in claim 15 wherein said tubular elastic member forms a secondary chamber surrounding said die and said outlet openings which is maintained isolated from the primary chamber.